

Message Text

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ACTION EUR-25

INFO OCT-01 EA-11 NEA-10 ADP-00 SS-15 SCI-06 NSC-10 HEW-08

DOT-00 INT-08 HUD-02 DOD-00 CEQ-02 EB-11 COME-00

EPA-04 IO-13 CIAE-00 PM-07 INR-10 L-03 NSAE-00 PA-03

RSC-01 PRS-01 USIA-15 TRSE-00 SAJ-01 RSR-01 SCEM-02

AEC-11 /181 W

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R 210613Z JUL 73

FM AMEMBASSY OSLO

TO SECSTATE WASHDC 6878

INFO AMEMBASSY ANKARA

AMEMBASSY ATHENS

AMEMBASSY BONN

AMEMBASSY BRUSSELS

AMEMBASSY COPENHAGEN

AMEMBASSY LISBON

AMEMBASSY LONDON

AMEMBASSY LUXEMBOURG

AMEMBASSY OTTAWA

AMEMBASSY PARIS

AMEMBASSY REYKJAVIK

AMEMBASSY ROME

AMEMBASSY STOCKHOLM

AMEMBASSY TOKYO

AMEMBASSY THE HAGUE

USMISSION EC UNN

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WHITE HOUSE

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WHITE HOUSE FOR TRAIN FROM HODSOLL

E.O. 11652: N/A

TAGS: SENV, NATO, DA

UNCLASSIFIED

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SUBJ: CCMS: ENERGY CONSERVATION PROJECT (NORWAY)

WHITE HOUSE FOR TRAIN FROM HODSOLL

(1. SUMMARY: US TEAM MET JULY 17 WITH HANS PETTER SUNDH (RESEARCH SECRETARY AND SPECIAL ASSISTANT TO DIRECTOR) AND HALLVARD HAGEN (HEAD OF THE DIVISION FOR HEATING, VENTILATING AND SANITATION) OF NORWEGIAN BUILDING RESEARCH INSTITUTE, AS WELL AS ERIK LYKKE (DIRECTOR GENERAL OF MINISTRY OF ENVIRONMENT), AND TWO OF LYKKE'S DEPUTIES, SVEIN KNUDSEN AND PER-CHRISTIAN ENDSJO. NORWEGIAN BUILDING INSTITUTE OFFICIALS INDICATED GENERAL INTEREST IN CCMS ENERGY CONSERVATION PROJECT. HOWEVER, THEY NOTED THAT THEIR OWN RESEARCH EFFORTS WERE BEING DIRECTED INCREASINGLY TOWARDS THE DEVELOPMENT OF MORE EFFICIENT HEATING EQUIPMENT AND HOUSEHOLD APPLIANCES. ENERGY COSTS IN NORWAY ROUGHLY ONE-THIRD OF EQUIVALENT IN U.S., AND BUILDING CODES (AS IN ALL SCANDINAVIA) ARE ALREADY EXTREMELY STRICT FROM ENERGY CONSERVATION POINT OF VIEW. NEVERTHELESS, U.S. TEAM (BERG, BUREAU OF STANDARDS) EMPHASIZED THAT NORWEGIAN EXPERIENCE IN ENERGY CONSERVATION IN BUILDING AREA WAS OF GREAT INTEREST TO OTHER COUNTRIES, PARTICULARLY U.S. IT IS INTERESTING TO NOTE THAT THE NORWEGIAN BUILDING RESEARCH PROGRAM IS MUCH GREATER THAN US PROGRAMS IN THIS AREA IN RELATION TO THE RESPECTIVE SIZES OF THE TWO COUNTRIES. LYKKE (MOE), WHO COORDINATES CCMS PROJECTS IN GON, STATED THAT NORWAY WAS GENERALLY WELL DISPOSED TOWARD PROJECT, BUT THAT EXTENT OF PARTICIPATION WOULD BE UP TO EXPERTS IN BUILDING RESEARCH INSTITUTE. LYKKE SUGGESTED THAT, FOLLOWING COMPLETION OF TOUR, US BE IN TOUCH WITH BUILDING RESEARCH INSTITUTE THROUGH EMBASSY, KEEPING MOE INFORMED. END SUMMARY.

2. MORNING MEETING WITH SUNDH AND HAGEN OF NORWEGIAN BUILDING RESEARCH INSTITUTE OPENED WITH US PRESENTATION OF PURPOSE OF VISIT. HAGEN NOTED THAT SCANDINAVIAN BUILDING RESEARCH CONGRESS COMMITTEES PROVIDED FOR SCANDINAVIAN COOPERATION IN DEVELOPMENT OF TECHNICAL BASIS FOR MODEL BUILDING CODES. TECHNICAL RESULTS OF COMMITTEES WERE THEN FORWARDED TO APPROPRIATE MINISTRIES OF NATIONAL GOVERNMENTS AS RECOMMENDATIONS FOR GOVERNMENT ACTION. WHILE EACH NATIONAL GOVERNMENT HAS RIGHT TO DETERMINE ITS OWN BUILDING STANDARDS, HAGEN REPORTS THAT THE BUILDING STANDARDS ARE SIMILAR. SCANDINAVIAN BUILDING RESEARCH CONGRESS MEETS EVERY THREE YEARS WITH INTERVENING TWICE YEARLY MEETINGS OF ITS BOARD OF DIRECTORS. NORWEGIAN BUILDING RESEARCH INSTITUTE, WHICH IS REPRESENTED ON THESE UNCLASSIFIED

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COMMITTEES, REPORTS TO MINISTRY OF MUNICIPALITIES AND LABOR AFFAIRS IN THIS RESPECT.

3. NORWEGIAN BUILDING RESEARCH INSTITUTE EMPLOYS 160 PERSONS AND HAS A DOLS 3 MILLION ANNUAL BUDGET. 70 PERCENT OF THE INSTITUTE'S FUNDS COME FROM GOVERNMENT APPROPRIATIONS (ROYAL NORWEGIAN COUNCIL FOR SCIENTIFIC & INDUSTRIAL RESEARCH), REMAINDER OF FUNDING COMES FROM OTHER MINISTRIES AND INDUSTRY.

4. CONSIDERABLE DISCUSSION OF NORWEGIAN ENERGY SOURCES SHOWED THAT NEARLY ALL ELECTRIC POWER IS PRESENTLY GENERATED HYDRO-ELECTRICALLY. 50-60 PERCENT OF HOUSES USE ELECTRIC POWER FOR HEATING, AS DO PERHAPS 30 PERCENT OF OFFICES AND PUBLIC BUILDINGS.

HAGEN REPORTS THAT THERE HAS BEEN OVER THE PAST 10 YEARS AN AVERAGE GROWTH RATE OF ELECTRIC POWER CONSUMPTION OF 10 PERCENT PER YEAR. THIS GROWTH RATE IS PRESENTLY DECREASING SOMEWHAT. WHILE HYDRO-ELECTRIC SOURCES ARE CONSIDERED ADEQUATE TO MEET POWER NEEDS OF NEXT 10-15 YEARS, NORWAY HAS MADE SELECTION OF EIGHT NUCLEAR PLANT SITES. NUCLEAR PLANTS POTENTIALLY WILL BE USED IN CONJUNCTION WITH HYDRO SOURCES AS BASE SOURCE WITH HYDRO FOR PEAKING. IT IS EXPECTED THAT ALL NORWEGIAN HYDRO-ELECTRIC POTENTIAL WILL HAVE BEEN FULLY EXPLOITED WITHIN NEXT 20 YEARS. HAGEN ALSO NOTED THAT GRADUAL INCREASING COOPERATION BETWEEN NORWAY, SWEDEN AND DENMARK HAS CREATED TRI-COUNTRY GRID.

5. CURRENT NORWEGIAN PRICE/KWH FOR ELECTRICITY USE IN RESIDENTIAL BUILDINGS IS DOLS .01, APPROXIMATELY ONE-THIRD OF THAT IN U.S. CONSERVATION BY HOUSEHOLDERS IS ENCOURAGED BY REQUIRING EACH CONSUMER TO STATE AT BEGINNING OF YEAR MAXIMUM KW DEMAND AT ANY GIVEN TIME. HOUSEWIFE CAN CHECK ACTUAL DEMAND BY OBSERVING METER LOCATED IN KITCHEN. IF DEMAND AT ANY GIVEN TIME IS HIGHER THAN THAT ORIGINALLY CONTRACTED FOR, EXTRA DEMAND CHARGE IS APPLIED. TO MAINTAIN LEVEL OF DEMAND UNDER ESTABLISHED LEVEL, HOUSEHOLDER GENERALLY HEATS HOUSEHOLD HOT WATER AT NIGHT WHEN OTHER CURRENT DEMANDS ARE MINIMAL.

6. HAGEN REPORTS THAT MODERN INSULATION REQUIREMENTS CAME INTO EFFECT 20 YEARS AGO. PRESENT ENERGY CONSUMPTION IN AVERAGE TWO-STORY THREE-BEDROOM DETACHED RESIDENCE (INCLUDING LIVING-DINING ROOM, KITCHEN AND BATHROOM), IS 12,000 KWH/YEAR (AVERAGE U.S. RESIDENT USES 10,000 KWH/YEAR JUST FOR HOT WATER). PRESENT BUILD-
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DING TREND IS TO CONSTRUCT ONE STORY RATHER THAN 2 STORY DETACHED DWELLINGS. NEW DWELLINGS ALSO INCLUDE SUBSTANTIALLY GREATER USE OF GLASS WHICH SUNDH OBSERVED WILL RESULT IN GREATER HEAT LOSS.

7. THE FRAMEWORK FOR NORWEGIAN OUTER WALLS USUALLY CONSISTS OF 2X4 INCH POSTS AT INTERVALS OF 60 CM. THE REST OF THE WALL IS BUILT UP AS FOLLOWS, FROM OUTSIDE TO INSIDE: EXTERNAL WOODEN SIDING, ASBESTOS, CEMENT OR SIMILAR MATERIAL, ASPHALT IMPREGNATED PAPER, 10 CM IMPREGNATED MINERAL WOOL (DENSITY 30-45 KG/CUBIC METER), VAPOR-PROOF PAPER, INSIDE WOOD COVERING, PLASTER BOARD OR THE LIKE.

8. HAGEN ALSO REPORTED THAT HOUSING LEAKAGE IN NORWAY(WHEN ALL VENTS ARE CLOSED) VARIES FROM .3 TO .5 AIR CHANGES/HOUR. GON HAS NO ROUTINE PROCEDURE FOR INSPECTING HEATING LEAKAGES IN HOUSES, BUT OCCASIONALLY IN SPECIAL CASES MAKES MEASUREMENTS WITH TRACER GASES SIMILAR TO THOSE CONDUCTED IN US. VENTILATION PROBLEM IS IMPORTANT IN NORWAY AS IN MANY PARTS OF THE COUNTRY THERE ARE 40 STORM DAYS/YEAR.

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WHITE HOUSE

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9. HAGEN AND SUNDH DID NOT INDICATE WHY NORWAY HAS ADOPTED STRICT STANDARDS FROM ENERGY CONSERVATION POINT OF VIEW. SUNDH SUGGESTED THAT PERHAPS THIS ATTITUDE HAD COME ABOUT NATURALLY AS A RESULT OF GENERAL RESOURCE SCARCITY AFTER WORLD WAR II. THE PRICE UNCLASSIFIED

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OF ELECTRICITY HAS, HOWEVER, DOUBLED OVER THE PAST 15 YEARS, AND THE PRICE OF FUEL OIL HAS RISEN BY 30 PERCENT. HAGEN SAID THAT FUTURE ELECTRICITY PRICES WOULD BE SET AT RATE WHICH WOULD CORRESPOND TO ITS PRODUCTION FROM NEW RATHER THAN OLD HYDRO-ELECTRIC PLANTS. LATTER HAVE OF COURSE LONG SINCE BEEN AMORTIZED.

10. WITH RESPECT TO RESEARCH PROJECTS UNDERWAY OR CONTEMPLATED, HAGEN AND SUNDH REPORTED THAT INSTITUTE HAD PREVIOUSLY BEEN MORE CONCERNED WITH ENERGY CONSERVATION. TODAY INSTITUTE IS MORE CONCERNED WITH THE DEVELOPING MORE EFFICIENT HEATING UNITS THAN WITH BUILDING DESIGN. SUNDH, HOWEVER, INDICATED A PARTICULAR INTEREST IN FURTHER RESEARCH WITH RESPECT TO TECHNIQUES FOR RESTRICTING WINDOW AREAS IN HOUSES, AND RECUPERATION OF HEAT FROM VENTILATION SYSTEMS (PERHAPS THROUGH THE USE OF HEAT EXCHANGERS IN CHIMNEY FLUES). SUNDH NOTED THAT THE INSTITUTE WAS CONTINUING ITS FIELD MEASUREMENTS OF HEATING EQUIPMENT IN HOUSES. HOWEVER, LABELING OF ENERGY EFFICIENCY IN FURNACES AND HOUSEHOLD APPLIANCES IS VOLUNTARY IN NORWAY.

11. NORwegians NOTED FURTHER IMPETUS TO ENERGY CONSERVATION IN NORWAY WOULD COME FROM ENVIRONMENTAL CONCERNS WITH RESPECT TO FURTHER EXPLOITATION OF HYDRO-ELECTRIC POTENTIAL AND DEVELOPMENT OF NUCLEAR POWER. DESPITE REASONABLE STANCE OF NORWEGIAN MINISTRY OF ENVIRONMENT, SUNDH NOTED INTENSE PUBLIC CONCERN WITH RESPECT TO ANY DEVELOPMENT THAT WOULD AFFECT THE ENVIRONMENT.

12. SUNDH ALSO EXPRESSED INTEREST IN REDUCING ENERGY CONSUMPTION IN MANUFACTURE OF BUILDING MATERIALS. HE MENTIONED THAT MR. AGE HALQUIST OF THE NORWEGIAN BUILDING RESEARCH INSTITUTE WAS ALSO A MEMBER OF THE NORWEGIAN COMMITTEE OF CONCRETE TECHNOLOGY AND WOULD BE A GOOD PERSON FOR THE U.S. TO CONTACT WITH RESPECT TO ENERGY CONSERVATION IN THE NORWEGIAN CEMENT INDUSTRY.

13. IN CONCLUDING CONVERSATIONS, SUNDH NOTED THAT CITY OF OSLO URBAN PLANNING CHIEF (MRS. HELENE KOBBE) WAS PRIMARY FORCE IN RESTRICTING STREETS FROM USE OF AUTO. IN ADDITION SUNDH STATED THAT SAS WAS REDUCING THE SPEED OF ITS AIRCRAFT TO REDUCE ENERGY CONSUMPTION.

14. IN AFTERNOON SESSION WITH DIRECTOR GENERAL OF MINISTRY OF ENVIRONMENT LYKKE, US TEAM MADE GENERAL PRESENTATION OF PURPOSE UNCLASSIFIED

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OF VISIT, NOTING THAT WE HAD MUCH TO LEARN FROM NORWEGIAN EXPERIENCE CONCERNING ENERGY CONSERVATION IN BUILDINGS. LYKKE STATED THAT IT WAS UP TO NORWEGIAN EXPERTS IN THIS AREA TO EXPRESS INTEREST IN PROJECT. HE STRESSED THAT IT WOULD BE IMPORTANT TO INVOLVE SWEDEN IN ANY EFFORT IN THIS AREA. FROM ENVIRONMENTAL POINT OF VIEW ENDSJO OF THE MINISTRY'S POLLUTION CONTROL DEPARTMENT EXPRESSED HIS OFFICE'S VIEW THAT IT WAS IMPORTANT GENERALLY TO CONSERVE USE OF RESOURCES IN NORWAY PARTICULARLY WHEN ONE CONSIDERED THE FACT THAT NORWAY WOULD BE RUNNING OUT OF SURPLUS HYDRO-ELECTRIC POWER WITHIN THE NEXT DECADE. LYKKE STATED THAT SWEDEN AND DENMARK WOULD PROVIDE NORWAY WITH PEAKING POWER WITHIN THE NEXT 2-3 YEARS. IT WAS EXPECTED THAT AT LEAST ONE NUCLEAR POWER PLANT WOULD BE DEVELOPED IN NEXT 10 YEARS. (PROPOSALS FOR NUCLEAR POWER DEVELOPMENT ARE IN THE PROCESS OF BEING PRESENTED TO THE STORTING). ACCORDING TO LYKKE, NORWAY IS

ALSO CONSIDERING CONSTRUCTION OF FOSSIL-FUELED POWER PLANT,
WHICH WOULD USE NORTH SEA OIL AND/OR GAS.
BUCHANAN

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Message Attributes

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